

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

## PCT

### WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

To:  <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: 150px; text-align: center;"> <b>MAIWALD</b>  <small>Patentanwälte GmbH</small>  <b>13. Okt. 2005</b>  <b>MÜNCHEN</b>  <b>FRIST 10.01.06 not is.</b>  <i>ANT: Erwidernng</i> </div> <div style="margin-top: 10px;"> <i>see form PCT/ISA/220</i> </div>		<div style="border: 1px solid black; padding: 5px; margin-top: 10px;">             Date of mailing              (day/month/year) see form PCT/ISA/210 (second sheet)           </div>
Applicant's or agent's file reference <i>aut Written Opinion</i> see form PCT/ISA/220		
<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;">             International application No.  <b>PCT/EP2004/014618</b> </div> <div style="width: 30%;">             International filing date (day/month/year)  <b>22.12.2004</b> </div> <div style="width: 30%;">             Priority date (day/month/year)  <b>22.12.2003</b> </div> </div>		
International Patent Classification (IPC) or both national classification and IPC <b>G05B19/042, G05B19/418</b>		
Applicant <b>VEGA GRIESHABER KG</b>		

**1. This opinion contains indications relating to the following items:**

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☒ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

**2. FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

**3. For further details, see notes to Form PCT/ISA/220.**

Name and mailing address of the ISA:  <div style="display: flex; align-items: center;"> <div>             European Patent Office              D-80298 Munich              Tel. +49 89 2399 - 0 Tx: 523656 epmu d              Fax: +49 89 2399 - 4465           </div> </div>	Authorized Officer  <b>Pöllmann, H.M.</b>  Telephone No. +49 89 2399-6017
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**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/EP2004/014618

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**Box No. I Basis of the opinion**

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1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material:  
☐ in written format  
☐ in computer readable form
  - c. time of filing/furnishing:  
☐ contained in the international application as filed.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

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**Box No. II Priority**

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1. ☒ The validity of the priority claim has not been considered because the International Searching Authority does not have in its possession a copy of the earlier application whose priority has been claimed or, where required, a translation of that earlier application. This opinion has nevertheless been established on the assumption that the relevant date (Rules 43bis.1 and 64.1) is the claimed priority date.
2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43bis.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.
3. Additional observations, if necessary:

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International application No.  
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**Box No. IV Lack of unity of invention**

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1. ☒ In response to the invitation (Form PCT/ISA/206) to pay additional fees, the applicant has:
- ☐ paid additional fees.
  - ☒ paid additional fees under protest.
  - ☐ not paid additional fees.
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is
- ☒ complied with
  - ☐ not complied with for the following reasons:
4. Consequently, this report has been established in respect of the following parts of the international application:
- ☒ all parts.
  - ☐ the parts relating to claims Nos.

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**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

Novelty (N)	Yes: Claims	1-19
	No: Claims	
Inventive step (IS)	Yes: Claims	1-19
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-19
	No: Claims	

2. Citations and explanations

**see separate sheet**

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**Box No. VII Certain defects in the international application**

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The following defects in the form or contents of the international application have been noted:

**see separate sheet**

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement (Rule 43bis.1(a)(i)).**

1. Reference is made to the following document:

D1 = Wolfram Müller: "Das HART-Feld-Kommunikations-Protokoll", ATP Automatisierungstechnische Praxis 34 (1992) September, No. 9, München, DE.

2. **Novelty**

Independent claims 1, 2 and 11 inter alia show the following features:

- a) the master sends a broadcast command to the slaves which assigns an address unequal 0 to all slaves and
- b) the polling addresses are changed for all slave devices from the identical polling address to a unique polling address for each slave.

These features are not known from the documents mentioned in the search report, thus, the subject-matter of claims 1, 2 and 11 is new (Article 33(2) PCT).

3. **Inventive step**

The following features are known in the art of HART-technology (see for example D1):

- i) Multidrop networks are known. They consist of several slaves which all have an unique address in the range from 1 - 15. (The address 0 enables the slave to work in the point-to-point mode.)
- ii) Broadcast commands are known. This means, the master can send a telegram which is intended for all slaves.
- iii) Universal commands are known. One of these commands is the command #6 which means "Write Polling Address". Using this universal command which is understood by every HART slave, the HART master assigns an address to a slave.

Starting from D1 which is considered to be the closest prior art, the problem to be solved is, **how to install the multidrop network.**

It is not obvious to send the HART command #6 as a broadcast command to initialise the slave devices and thereafter to change the addresses of all slave devices to a unique polling address as provided by features a) and b) of claims 1 and 2.

Therefore, the subject-matter of independent claims 1, 2 and 11 involves an inventive step (Article 33(3) PCT).

4. The subject-matter of the application resp. claims 1 - 19 is industrial applicable in the field of the configuration of HART multidrop networks (Article 33(4) PCT).

**Re Item VII**

**Certain defects in the international application**

1. The claims are not drafted in the two-part form (Rule 6.3 (b)(i) and (ii) PCT).
2. The description does not indicate the background art and cite the documents reflecting such art (Rule 5.1(a)(ii) PCT).